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ABSTRACT

Covered in the assessment are 128 school systems having contracts for Consumer and Homemaking Education with the Division of Vocational and Technical Education (Illinois) and meeting at least one of four criteria for qualifying as disadvantaged. The evaluation followed the guidelines of the Information Based Evaluation Model (IBE) which addresses questions of (1) program effectiveness in communicating consumer knowledge and areas of strength and weakness (discovered using simple descriptive statistics), and (2) isolation of program dimensions of instructional strategies related to program success (using a methodology termed program structure analysis which employs multiple discriminant analysis). The opening chapters contain a summary, five implications and recommendations, and a program description. For the evaluation design, a chronological overview, the sampling procedure, and instrumentation are reported. The data collection instruments used (Illinois Test of Consumer Knowledge (ITOCK); Self Observation Scales (SOS); and proposal, student, and teacher data sheets) are briefly described and data elements or scales are listed. Detailed findings are organized and discussed at length under the headings of: A Profile of Consumer and Homemaking Education Students, ITOCK, Components of Success, SOS, Student versus Teacher Perceptions, and Interest and Achievement in Consumer and Homemaking Education. (Author/MS)

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A COMPARATIVE ASSESSMENT OF SECONDARY CONSUMER AND HOMEMAKING EDUCATION PROGRAMS

1974-75

FINAL REPORT

CE007805

The Research reported herein was performed pursuant to a contract with the State of Illinois, Illinois Office of Education, Division of Vocational and Technical Education, Research and Development Unit. Contractors undertaking projects under such sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Illinois Office of Education position or policy.

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Jack Stenner
Jerry Matson
IBEX, Incorporated

I. EXECUTIVE SUMMARY

School districts in economically depressed and high unemployment areas have contracted with the Division of Vocational and Technical Education for approval and funding of Consumer and Homemaking Education programs. The contract agreements cover the following minimum content areas:

A. Rationale describing the conditions in the geographic areas to be served covering at least:

   1. rate of unemployment;
   2. median family income;
   3. number of persons per thousand receiving general assistance;
   4. number of children per thousand receiving aid to dependent children; and
   5. other data supporting an economically depressed or high unemployment configuration.

B. Statement of management objectives to be achieved;

C. Implementation procedures illustrating a proposed plan of action via a curriculum outline, approximate allocation of time devoted to each unit of study, number of students enrolled in the course, and course credits to be given;

D. Names and amount of time to be given to the program by both Home Economics teachers and those teaching Consumer and Homemaking Education;

E. A description of the evaluation procedures to be utilized;

F. Budget data showing prorated teachers' salaries and covering instructional materials.

One hundred twenty-eight (128) school systems having contracts for Consumer and Homemaking Education are covered in this assessment. All districts met at least one of the criteria for qualifying as disadvantaged, i.e., (1) unemployment in excess of six percent, (2) number of persons receiving general assistance above 10 per thousand, (3) aid to dependent children of 60 or more per thousand, or (4) an income below the national average of $5,400.00.

Planning of this evaluation has followed the guidelines of the Information Based Evaluation Model (IBE). Under this system, attention to program objectives is viewed in the context of supplying information to those individuals up and down the line who have the responsibility for the ultimate success of program operation. The system's flexibility contrasts with the limited responsiveness of evaluations that are based on fixed objectives. The Information Based Evaluation approach allows for changes in information needs; it permits the posing of new questions throughout the program cycle.

The analytical model selected for this evaluation addresses two major classes of questions: (1) Is the program effective in communicating consumer knowledge and, if so, in what areas is the program strongest and in what areas is it weakest?, and (2) Given that the program is successful, can certain program dimensions or instructional strategies be isolated that are related to program success? Simple descriptive statistics are used for

answering Type 1 questions. Type 2 questions have been answered using a methodology termed "program structure analysis" which employs multiple discriminant analysis to isolate program dimensions that discriminate successful from unsuccessful classroom approaches.

One way to summarize the characteristics of the Consumer and Homemaking Education Program participants is to imagine that we have just selected one individual at random and want to predict the characteristics that will describe this hypothetical person. The odds are 2 to 1 that our person is female and a high school senior, and 6 to 1 that she is white. The chances are she is from a family with an average annual income of about $10,000 - $12,000. She is a C+ to B- student of above average popularity. The chances are that our hypothetical young lady will go to work after graduation from high school, although she is almost as likely to go to college. Everything considered, this young lady does not differ much from the average female high school senior encountered in high schools across the country.

The Consumer and Homemaking Education Program is having a significant impact on student performance on the Illinois Test of Consumer Knowledge (ITOCK) if we can assume that experimental and control students were equal on consumer knowledge prior to the program's inception. Without a pre-post design, the alternative hypothesis that Consumer and Homemaking Education Program students were initially more aware than the controls, remains plausible. However, we consider it highly unlikely that such an initial difference could manifest itself so consistently and

evenly across fourteen subtests. The pattern of scores is more conducive to an explanation based on program effect than to one based on a sampling deficiency.

Several ITOCK subtest scores seem to be influenced by differential program emphases. In particular, the Money Management, Housing, Food, Clothing, Recreation, and Consumer in Society subtests show significant variation from expectation, suggesting that these areas receive more than average emphasis in most of the Consumer and Homemaking Education Program classes. Interestingly, these areas are among the ones cited by teachers as of most importance.

Program Structure Analysis (PSA) is a methodological tool, combining several analytical strategies, designed to empirically define the ways programs differ and to relate these differences to program outcomes. In the evaluation of the Consumer and Homemaking Education Program, two broad process domains were selected for study: (1) program characteristics including length of course, number of units developed and implemented, etc., and (2) relative importance of various instructional approaches including resource persons, textbooks, field trips, lecture approach, etc. Two separate discriminant analyses were run relating the process variables to Total score on the ITOCK. The dichotomous criterion variable was group membership. Group 1 was composed of teachers with low classroom mean scores on the ITOCK, while group 2 was composed of teachers with high classroom mean scores.

Three of the ten program characteristics are highly significant in predicting classroom performance on the ITOCK. The first important variable is length of the course (in days). The high achieving group received an average of 31% more instructional time in a Consumer and Homemaking Education class than did the low achieving group. Wiley and Harnischfeger (1974) state:

> It is obvious that if a child does not go to school at all, he will not directly benefit from schooling. If a child goes to school every day for a full school year, he will achieve his maximum benefit from that schooling, other circumstances being equal. It would also seem clear that if he attends school less than the full year, but more than not at all, the benefits he derives from schooling should be in between. That is, the quantity of schooling should be a major determinant of school outcomes.

This is, in essence, what we have found in this evaluation. Students' knowledge of Consumer and Homemaking Education is directly related to amount of time spent in Consumer and Homemaking Education classes. At first glance, this finding may seem obvious, but recent studies claiming that school does not make a difference in student achievement are plentiful. The results reported here run directly counter to such claims. Increased exposure to Consumer and Homemaking Education instruction results in increased learning, as measured by the ITOCK.

Six instructional processes were found to be significant in predicting high scores on the ITOCK. A discovery approach underlies each of the six significant predictors and this, as

much as any other finding in this evaluation, has implications for instruction. Students in Consumer and Homemaking Education classes learn more when they are "acting", "doing", "creating", "moving", and "discovering" than when instructional approaches not having an "action-oriented" dimension are employed.

Lavin (1965) asserts that few consistent and sizable relationships between academic achievement and affective behavior have been found. This evaluation provides some of the first large-scale evidence that students' affective behavior is inextricably implicated in scholastic achievement. The instructional implications of these results (coupled with past research in the affective domain) appear clear and straightforward. Instructional strategies in Consumer and Homemaking Education which provide a means for more students to have more success would seem preferable to those which do not, because of the potential impact on affective development of the students. This implication presupposes that affective development is a direct product of cumulative success and failure, and the best available evidence suggests that this is, in fact, the case. Important in this formulation is the recognition that one semester or one year of success may have little impact, rather, cumulative success over several years is needed to positively influence something as fundamental as students' self concepts. What is needed in Consumer and Homemaking Education is an intensive and extended exposure to success- and competence-enhancing experiences.

All in all, it is safe to say that self concept is profoundly influenced by what goes on in the classroom. Consumer and Homemaking Education teachers are not exempt from a responsibility for the affective development of their students. Quite the contrary, Consumer and Homemaking Education teachers appear to exercise more freedom and tend to innovate more in selecting and implementing educational strategies, and thus might be more likely to address students' affective needs. Many of the students served by Consumer and Homemaking Education programs evidence low self concepts and are about to face the new demands and pressures of a job and family. Any contribution that the Consumer and Homemaking Education Program can make to feelings of self worth and competence would be welcome.

II. IMPLICATIONS AND RECOMMENDATIONS

One of the most awkward postures to deal with in secondary education is that of relevance. Efforts in this direction have continually been cast and recast in Social Studies, Language Arts and Physical Education. It seems apparent that similar difficulties in Consumer and Homemaking Education need not emerge on the same level of intensity. Students become consumers at an early age and develop some degree of insight early in their lives into the problems to be faced as young adults. As participants in the family group, they become involved firsthand and vicariously in consumer-related experiences and cannot avoid developing a rather extensive foundation for adult roles and responsibilities.

If we react and meet the young adult needs, be they real or fancied, the question of relevancy becomes moot. If we, as educators, fail and the students find themselves in a captive, non-responsive environment, we must accept partial responsibility for the success or failure of their first step as adults.

The following implications and recommendations present themselves, based upon our evaluation results:

- The profile of Consumer and Homemaking Education (CHE) suggests very little departure from the profile of typical Illinois high school students. If the intent of this program is to reach a select audience with par-

ticular characteristics (i.e., economically disadvantaged students) then more quality control needs to be exercised in selecting students for the program.

- CHE teachers should be informed of the Illinois Test of Consumer Knowledge (ITOCK) and the potential it offers as a classroom assessment device.

- Measurement in the affective domain looms as an increasingly important variable particularly in vocational education programs. The finding that vocational education students, including a large portion of CHE enrollees, manifest low self concepts, reflects the cumulative failures these students have experienced in their public school careers. Although vocational education programs cannot stand alone in meeting this need, the fact remains that a high majority of students served in CHE programs have fundamental feelings of inadequacy and insecurity. Furthermore, these feelings are manifest at a time when a new career and family constellation is in the offing.

- Recognizing that "time in instruction" has been isolated as an important variable, some consideration needs to be given to more systematic planning in the length of CHE courses.

- Six important instructional approaches have been empirically related to student achievement. These are (1) resource persons, (2) debates, (3) student demonstrations, (4) multi-media. (5) team teaching, and (6) field trips. Each of these six instructional approaches is characteristic of the high achieving classrooms to a significantly greater degree than they are characteristic of low achieving classrooms. Attempts should be made to communicate these findings to teachers and for systematically incorporating these approaches into future contracts.

Contractual agreement should be a result of fairly well defined guidelines and the guidelines should receive their definition from prior years' evaluation results. Specifically, product and process evaluation skills should be in evidence in the proposals, and the requirement for objectives should either be dropped, developed by the classroom instructor, or solicited according to overall program evaluation results.

Subject to current policy positions and legislative authority, the authors suggest the following options as stepping off points for modifications to the Consumer and Homemaking Education Program.

1. Delineate, in a more precise manner, student eligibility requirements.
2. Increase the amount of funding to those districts evidencing the largest disadvantaged population.

3. Make the Illinois Test of Consumer Knowledge available at cost to those districts who participated in this assessment.

4. Establish as a primary contracting focus, those districts who propose a Consumer and Homemaking Education course emphasizing affective learning.

5. Fund a contract for the exclusive development of affective learning materials in Consumer and Homemaking Education.

6. Develop a process manual for those approaches determined to be the most significant in their impact.

7. Establish a "methods team" to provide consultive service to contracted districts.

8. Require contracting districts to supply answers to evaluation questions of interest developed by the Special Programs Unit.

9. Substitute evaluation questions for objectives.

III. PROGRAM DESCRIPTION

We have all heard the expression "in one ear and out the other". We suggest that a comparable adage "in one eye and out the other" will never attain equivalent usage. The overwhelming impact of visual stimuli on the youthful consumer appears to be at the center of consumer and homemaking education. That is to say that these youthful consumers need a more complete awareness of the host of institutions and organizations who daily attempt to influence their judgements (via the media) on the adoption of a life style. Additionally, they must come to understand the relationship which their values and aspirations have to the limitless judgements they make as consumers and homemakers.

We are not suggesting that the mission of consumer and homemaking education is to develop students who disregard all inducements of the media. We do suggest, however, that the mission is to foster a level of competence in consumer skills and knowledge which allows the students to understand what their real desire is in an appropriate value structure. This gained or fostered competence allows the students to appropriately use the resources available to them in relationship to their emerging life style. The process, of course, is an evolving one which becomes the foundation of sound consumer skills for life.

One is hard pressed to recall, in modern times, when wage earners and homemakers were in greater need of expanded knowledge and skills to cope with the increasingly difficult demands of individual and family economics.

Local education agencies, acting in accord with State Board of Vocational Education and Rehabilitation policies which identify target communities, and authorization from the 1968 amendment to the Vocational Education Act of 1963 may establish programs which: 1) encourage home economics to give greater consideration to social and cultural conditions and needs, 2) encourage preparation for professional leadership, 3) are designed to prepare youth and adults for the role of homemaker, or to contribute to the employability of such youth and adults in the dual role of homemaker and wage earner, 4) include consumer education programs, and 5) are designed for persons who have entered, or are preparing to enter, the work of the home.

LEAs in economically depressed and high unemployment areas may contract with the Division of Vocational and Technical Education for approval and funding of Consumer and Homemaking Education programs. Generally, the proposed program or project will cover the following minimum content areas:

A. Rationale describing the conditions in the geographic area to be served covering at least:

1. rate of unemployment;
2. median family income;
3. number of persons per thousand receiving general assistance;
4. number of children per thousand receiving aid to dependent children; and
5. other data supporting an economically depressed or high unemployment configuration.

Applicants must quote statistical data source.

B. Statement of management objectives to be achieved;

C. Implementation procedures illustrating a proposed plan of action via a curriculum outline, approximate allocation of time devoted to each unit of study, number of students enrolled in the course and course credits to be given;

D. Names and amount of time to be given to the program by both Home Economics teachers and those teaching Consumer and Homemaking Education;

E. A description of the evaluation procedures to be utilized;

F. Budget data showing prorated teachers' salaries and covering instructional materials.

One hundred twenty-eight (128) school systems having contracts for Consumer and Homemaking Education are covered in this assessment. All districts met at least one of the criteria for qualifying as disadvantaged, i.e., (1) unemployment in excess of six percent, (2) number of persons receiving general assistance above 10 per thousand, (3) aid to dependent children of 60 or more per thousand, or (4) an income below the national average of $5,400.00.

All systems either had in their possession or had access to the following documents for guidance in operating Consumer and Homemeking Education programs: Guidelines for Consumer Education, 1973, An Annotated Bibliography for Consumer and Homemaking Education and Suggested Learnings: Consumer and Homemaking Education, 1972.

IV. EVALUATION DESIGN SUMMARY

The expanding literature on educational evaluation has become increasingly devoted to critical appraisal of the available tools and methodologies, since the realization that evaluation can guide rational thought and action within the decision-making process. Evaluation consists of specifying needs for information and subsequently collecting, analyzing and reporting data to satisfy those needs. Most information needs come from individuals in decision-making capacities. In the Consumer and Homemaking Education assessment, individuals making up that group were contract teachers, supervisors, and staffs of the Special Programs and Research and Development Units.

Planning of this evaluation has followed the guidelines of the Information Based Evaluation Model (IBE). Under this system, attention to program objectives is viewed in the context of supplying information to those individuals up and down the line who have the responsibility for the ultimate success of program operation. The system's flexibility contrasts with the limited responsiveness of evaluations that are based on fixed objectives. The Information Based Evaluation approach allows for changes in information needs; it permits the posing of new questions throughout the program cycle.

Chronological Overview

The evaluation staff applied the first broad strokes to the design in the fall of 1974. We requested the Division of Vocational and Technical Education identify a group of representative instructors, teaching in local systems under agreements executed with the Division of Vocational and Technical Education, with a school size and population mix and geographically spread over the entire state. Three one-day Dimension Analysis sessions took place in Harvey, Marion and Collinsville, Illinois with Consumer and Homemaking Education instructors, Special Programs and Research Staff, and IBEX evaluation team members.

The overriding focus of the three sessions was, what outcomes (criteria) were considered important for Consumer and Homemaking Education. This focus was two-fold; it provided targets in establishing questions of interest and provided tentative identification of potential dimensions which were the foundation of our inquiry statements.

Subsequent to the Dimension Analysis sessions, the data was compiled, organized and submitted to the Special Programs and Research and Development Units staffs for review and further analysis. The output of this review further delineated the nature and scope of eventual inquiry statements. A preliminary review of all contracts is on file to identify existing sources for the data base.

The reviewed output from the Dimension Analysis sessions was set up in a cross dimensional matrix from which the evaluation team developed the following primary set of evaluation questions of interest.

Program Structure Analysis

1. What are the dimensions of Consumer and Homemaking Education which produce the desired outcomes?
2. What characteristics of Consumer and Homemaking Education teachers differentiate the most successful from the least successful?
3. What modification should occur in the Consumer and Homemaking Education programs to increase their effectiveness?

Student Outcomes; non-cognitive

4. Does exposure to Consumer and Homemaking Education have an impact on students' self concept?
5. Do students have a positive attitude toward Consumer and Homemaking Education?

Student Outcomes: cognitive

6. Compared to students not taking Consumer and Homemaking Education courses, do Consumer and Homemaking Education students evidence greater knowledge of Consumer and Homemaking Education facts?
7. What is the relationship between classroom instruction and knowledge of Consumer and Homemaking Education?

Process Approaches

8. What is the range of use and characteristics of materials used in Consumer and Homemaking instruction?
9. Are there distinct instructional styles which are identifiable, and if so, what are the concomitants of the styles?

Course Structure

10. What is the relationship between student needs in Consumer and Homemaking Education and instructors' priorities?

11. What is the relationship between course structure (length, departmental sponsorship, sex ratio, etc.) and student outcomes?

Student Background

12. What are characteristics of the most successful and least successful students?

13. What is the relationship between student grades in Consumer and Homemaking Education and performance on a test of consumer knowledge?

Sampling Procedure

One hundred twenty-eight (128) school districts were selected for participation in the assessment. Each district was asked to administer:

1. a Teacher Data Sheet for every teacher teaching under agreement with the Division of Vocational and Technical Education;

2. a Student Data Sheet for at least one full class (a maximum of 30) of students currently taking Consumer and Homemaking Education;

3. the Illinois Test of Consumer Knowledge (ITOCK) Form A or B to one full class (maximum of 30) of students currently taking Consumer and Homemaking Education;

4. the Secondary Level of the Self Observation Scales (SOS) to one full class (a maximum of 30) of students currently taking Consumer and Homemaking Education;

5. the Illinois Test of Consumer Knowledge (ITOCK) to fifteen students who have not had, or were not taking, Consumer and Homemaking Education.

Instrumentation

The data collection instruments were developed and reviewed in consort with the staff participants of Special Programs Unit and Research and Development Unit. Each instrument is briefly described and data elements or scales are listed.

1. Proposal Data Sheet - contains selected data from the proposals submitted and approved for funding by the Division of Vocational and Technical Education.

   (file elements)

   - contract price
   - teachers' salaries (pro rated)
   - dollars of instructional materials per student
   - number of students
   - unemployment rate
   - general assistance level (district)
   - ADC level (district)
   - proposed program objectives by cognitive level (according to Bloom's Taxonomy)

2. Student Data Sheet - completed by the student

   (data elements)

   - sex
   - Consumer and Homemaking Education grade average
   - school grade average
   - number of semesters in Consumer and Homemaking Education
   - part-time work history

- amount of spending money
- future plans
- selection of instructional methods considered to be most beneficial to student
- preference listing of cognitive skills

3. Teacher Data Sheet - completed by the teacher

(data elements)

- total inservice and preservice hours
- years of teaching (all subjects)
- Number of contacts with the Division of Vocational and Technical Education
- participation in the development of the proposal
- number of units developed and implemented for this course
- use frequency of instructional methods
- preference listing of student cognitive skills
- number of courses taught outside Home Economics Department
- school graduated from

4. Illinois Test of Consumer Knowledge (ITOCK) - a group administered instrument, designed to assess knowledge in the following areas:

- individual consumer in the marketplace and in society
- money management
- consumer credit
- housing
- food
- transportation
- clothing

- health services, drugs and cosmetics
- recreation
- furnishings and appliances
- insurance
- savings and investments
- taxes
- the consumer and society

5. Self Observation Scales (SOS) - a direct self-report instrument (group administered) in which the student answers yes or no to a series of questions, measuring several factorally determined dimensions of a student's self-concept, the scales are:
   - self acceptance
   - self security
   - social confidence
   - social maturity
   - self assertion
   - family affiliation
   - peer affiliation
   - teacher affiliation
   - school affiliation

All instrument packages were assembled, mailed directly to, or discussed personally with, district Superintendents and contained assurances that no data would be reported out on individual students and that our intent was to assess at the program level only. A subset of data on 393 students was developed to provide a base for an analysis of interrelationships between self-concept, consumer knowledge and certain student demographic data. All means of identifying individual students in this subset have been destroyed as of this writing.

The analytical model selected for this evaluation addresses two major classes of questions: (1) Is the program effective in communicating consumer knowledge and, if so, in what areas is the program strongest and in what areas is it weakest, and (2) Given that the program is successful, can certain program dimensions or instructional strategies be isolated that are related to program success? Simple descriptive statistics are effective for answering Type 1 questions. Type 2 questions will be answered using a methodology termed "program structure analysis" which employs multiple discriminant analysis to isolate program dimensions that discriminate successful from unsuccessful classroom approaches.

V. EVALUATION RESULTS

This chapter organizes the findings of the Consumer and Homemaking Education program evaluation into several domains or areas. The first section presents a profile of the Consumer and Homemaking Education student and highlights some of the characteristics which set these students apart from typical high school students. The second section gives a brief history of the development of the Illinois Test of Consumer Knowledge (ITOCK). This instrument was used in assessing student achievement in fourteen areas of the Consumer and Homemaking Education domain. Results are presented which compare experimental and control students on the fourteen subtests as well as a battery total. Attention is also given to the differential performance of program students across subtests with emphasis on instructional implications of these findings. The third section describes the Self Observation Scales - Senior Level, and discusses some relationships between the nine scales of the SOS and scholastic achievement, student participation in extracurricular activities, post school plans, family income, and teacher-rated popularity. The fourth section addresses those program characteristics and instructional approaches that best discriminate between high achieving classrooms and low achieving classrooms. The last section looks at some important differences between student and teacher perceptions.

A Profile of Consumer and Homemaking Education Students

Important considerations in any program evaluation are the characteristics of the students enrolled in the program. The Illinois Consumer and Homemaking Education Program enrolls students in over one hundred school districts throughout the state and, thus, there is some variability among participating students with respect to socioeconomic status, scholastic standing, popularity with other students, race, sex, etc. This section of the report provides a multidimensional picture of the Consumer and Homemaking Education student against which the program outcomes can be interpreted and generalized. Strictly speaking, the results reported in this volume can only be generalized, in the best case, to student populations with characteristics similar to those of the Consumer and Homemaking Education Program participants. Fortunately, the group of students selected for this evaluation is close to a random probability sample of all Consumer and Homemaking Education students and, thus, generalization of the findings in this report to the Consumer and Homemaking Education population appears warranted.

As might be expected, there are twice as many females as males represented in the evaluation sample of 2577 students. Eighty-three percent of the students are white and thirteen percent are black. The average student has between a C+ and B- overall grade average. Twelve percent of the students have A averages, seven percent have D averages, and thirty-nine percent have C averages.

Thirty percent of the students are rated by their teachers as above average or highly popular, while fifty percent are rated as average. Only fifteen percent and four percent, respectively, of the students are rated below average and low on popularity.

Thirty-nine percent of the Consumer and Homemaking Education Program participants plan to finish high school and begin working immediately after graduation. Twelve percent intend to enroll in a trade school, nineteen percent wish to attend a community college and twenty-nine percent want to go on to college and get a college degree.

Sixty percent of the students live in families with incomes below the national average, six percent live in families with incomes below the Census Bureau poverty income level, and seventeen percent of the students have family incomes exceeding $16,000. All in all, the family incomes are quite representative of the national distribution, with a slight overrepresentation of low income families.

More than half of the students in the program are seniors, twenty-five percent are juniors, and sixteen percent are sophomores. White students are more likely to enroll in the Consumer and Homemaking Program during their sophomore year than are black students, but no differences in distribution are evident at the junior and senior levels. White males are almost twice as likely as black males to enroll in the Consumer and Homemaking Education Program, whereas black females are slightly more represented than white females. The female scholastic performance is slightly, but significantly, higher than the males with more top female students than top male

students enrolled in the program.

One-third of the males, compared with forty-two percent of the females, plan to begin working after finishing high school. Twice as many males as females plan to attend a trade school, while Junior college and college degree plans are equally represented across the sexes. Twenty-seven percent of the blacks and forty-one percent of the whites plan to begin working after leaving high school, while the reverse of forty percent of the blacks and twenty-seven percent of the whites plan to go to college and get a degree. The black students in the program are considerably more socioeconomically disadvantaged than the whites with an estimated average difference of five to six thousand dollars in family income.

Of those that plan to go to college, twenty-three percent are A students, forty-five percent are B students and twenty-six percent are C students. Of those planning to go to trade school, eight percent are A students, thirty-six percent are B students, forty-seven percent are C students and nine percent are D students. Of those planning to finish high school and go to work, five percent are A students, thirty-five percent are B students, forty-nine percent are C students and eleven percent are D students. The correlation between school plans and scholastic grades is .33 ($p < .001$). Although the relationship between post school plans and school grades is significant, it is not as large as one might suspect, and seems to indicate unreasonably high expectations on the part of some students.

Socioeconomic status or family income is, as might be expected, related both to school plans and to school grades. Students with C and D averages are overrepresented in the lower family income categories, while the students with B and A averages are overrepresented in the higher income categories. Teacher ratings of popularity are also related to school grades with high achievers being viewed by their teachers as more popular than low achievers. Not surprisingly, popularity is also related to socioeconomic status, with students from lower family income cetegories being considerably less popular than students from higher family income categories.

One way to summarize the characteristics of the Consumer and Homemaking Education Program participants is to imagine that we have just selected one individual at random and want to predict the characteristics that will describe this hypothetical person. The odds are 2 to 1 that our person is female and a high school senior, and 6 to 1 that she is white. The chances are she is from a family with an average annual income of about $10,000 - $12,000. She is a C+ to B- student of above average popularity. The chances are our hypothetical young lady will go to work after graduation from high school, although she is almost as likely to go to college. Everything considered, this young lady does not differ much from the average female high school senior encountered in high schools across the country.

Illinois Test of Consumer Knowledge (ITOCK)

Initially the purpose for developing a test for assessing competency in consumer education was to determine competencies at various developmental levels as a basis for planning curricula.

Dr. Charlotte L. McCall of Auburn University established parameters for the universe of concepts utilizing Suggested Guidelines for Consumer Education Grades Kindergarten Through Twelve (1970) which was developed by the staff of the President's Committee on Consumer Interests. She developed a pool of 782 items which was validated by two juries who critiqued the items for importance of the concepts and form and structure. Only those items which had approval of 93 percent or more of the combined juries were utilized.

Parallel forms of one hundred items were constructed incorporating a three-point certainty scale with the true-false format. Data were collected on a population of 1256 subjects which resulted in a reliability of .703 for one form and .804 for the other.

Using Dr. McCall's item pool and changing the item format to a multiple choice format, Dr. McCall and the IBEX staff developed the Illinois Test of Consumer Knowledge (ITOCK). The ITOCK is a group administered test in a multiple choice format consisting of the following 14 subtests

1. Consumer in the Marketplace - the essence of this subtest is to establish the degree of awareness in the area of personal and public policy economics and the rights and responsibilities of all participants.

   A representative item would be:

   Long range family goals

   a. are a waste of time as the future is too indefinite.
   b. are set using only the resources available at present.
   c. are not realistic for those families who do not have a savings account.
   d. take into consideration any changes in resources which may occur.

2. Money Management - items treat the difference between rational and emotional decisions when utilizing resources for goal attainment.

   A representative item would be:

   A family who is "living in the red"

   a. is living well on their income.
   b. uses credit cards instead of cash.
   c. lives from payday to payday and saves no money.
   d. spends more money in a month than they make.

3. Consumer Credit - the focus is on the choice of credit best suited to individual needs.

   A representative item would be:

   When buying a home, the monthly payments include money for

   a. the principal, interest, insurance and taxes.
   b. excrow, taxes, garbage, and sewage.
   c. realtor, builder, utilities, and architect.
   d. property improvements, repairs, liability and F.H.A.

4. Housing - attends to needs, responsibilities, obligations, and options in acquiring housing.

A representative item would be:

If you rent an apartment you are responsible for

a. replacing rusted out plumbing.
b. the repair of unsafe stairs.
c. leaving it in as good condition as when you moved in.
d. all maintenance.

5. Food - covers the use of the dollar based upon the ability to evaluate needs in relationship to wants.

A representative item would be:

Grade labels on beef tell consumers

a. the age of the meat.
b. the nutritional value of the meat.
c. the quality of the meat as to tenderness.
d. the level of wholesomeness of the meat.

6. Transportation - items in this subtest are designed to establish awareness levels which primarily focus on the complexities in purchasing an automobile.

A representative item would be:

Automobile liability insurance

a. requirements are set by federal law.
b. is required in order to get a driver's license.
d. is not required in all states.
d. has been replaced with no-fault insurance.

7. Clothing - assesses basic principles of good buymanship.

A representative item would be:

In examining ready-made garments for good workmanship, one of the most improtant considerations is

a. bound buttonholes.
b. the way the garment hangs.
c. the construction of the seams.
d. the way the buttons are sewed.

8. Health Services - the focus is on the exercise of sound judgement in the purchase of products and services.

A representative item would be:

The Council on Dental Therapeutics

a. does not recommend rinsing the mouth.
b. recommends a solution of salt and soda.
c. recommends any of the well known mouth washes.
d. has found the mint flavored washes to be more effective than others.

9. Recreation - assesses the appropriate use of discretionary time.

A representative item would be:

When there is leisure time

a. the government should provide some activities.
b. it is welcomed by everybody.
c. it means you are out of work.
d. it is up to individuals to use the time to their advantage.

10. Furnishings and Appliances - focuses on the skills in decision-making relative to alternative choices.

A representative item would be:

No wood used for furniture is perfect, which of these groups is the most desirable?

a. pine, oak, cherry
b. walnut, oak, birch
c. spruce, pine, oak
d. maple, walnut, oak

11. Insurance - items treat the difference in the nature and scope of various forms of insurance.

A representative item would be:

The least expensive type of life insurance is

a. a straight life policy.
b. a term policy.
c. an endowment policy.
d. an annuity policy.

12. Savings and Investments - attends to the role, importance and implementation of savings and investments.

A representative item would be:

A bank draft is a

a. notice an account is overdrawn.
b. check which is acceptable by those who do not know you.
c. notice to the bank that a large sum will be withdrawn.
d. statement of account status.

13. Taxes - this subtest addresses itself to the nature and use of taxes.

A representative item would be:

Traditionally, public schools have been financed by

a. local sales tax.
b. gasoline tax.
c. property tax.
d. car license tag sales.

14. Consumer in Society - focuses on the impact of public policy decisions in relationship to individual purchasing power.

A representative item would be:

When a manufacturer maintains product price, but increases the product quality,

a. it has the same effect as lowering the price.
b. it has the same effect as lowering the quality.
c. it limits choices available to the consumer.
d. it increases choices available to the consumer.

The split half reliability (stepped up by the Spearman Brown formula) for the Total ITOCK scores, Form A and B respectively, are .92 and .86. These reliabilities are consistent with most reported reliabilities in the achievement domain. Because of the small number of items measuring certain content areas no attempt was made to compute reliabilities for each subtest (i.e. Housing, Taxes). Table 1, on the following page, gives the correlation of each of the subtests with the ITOCK Total score for Form A and B.

Table 1

Subtest	Correlation between Subtest and Total ITOCK Form A N = (1079)		Correlation between Subtest and Total ITOCK Form B N = (1533)	
Consumer In The Marketplace	.84	(13)	.81	(13)
Money Management	.72	(4)	.52	(4)
Consumer Credit	.69	(6)	.46	(5)
Housing	.76	(4)	.50	(4)
Food	.65	(4)	.71	(4)
Transportation	.48	(4)	.53	(4)
Clothing	.59	(3)	.61	(4)
Health Services	.67	(8)	-	(0)
Recreation	.62	(2)	.49	(2)
Furnishings and Appliances	.62	(5)	.49	(4)
Insurance	.45	(8)	.56	(6)
Savings and Investments	.63	(4)	.37	(4)
Taxes	.58	(3)	.53	(3)
Consumer in Society	.76	(9)	.69	(10)

( ) = Number of items on subtest

The subtest Total correlations are generally higher for Form A which is consistent with the higher split half reliability on Form A. Most correlations are high, suggesting that a common construct (consumer knowledge) is being measured by the ITOCK items. In general, the psychometric properties of the ITOCK are satisfactory and the instrument can be used with confidence for the purposes at hand.

The intent of this section is to investigate the relationship between enrollment in the Consumer and Homemaking Education Program and subsequent performance on the Illinois Test of Consumer Knowledge (ITOCK). An expressed objective of virtually every teacher-prepared proposal was for students to acquire information and understanding about Consumer and Homemaking content areas. In an effort to provide broad coverage of the Consumer and Homemaking domain, each of the above described areas was treated as a subtest in the ITOCK. Item emphasis on the ITOCK paralleled the emphasis given to the various areas by teachers throughout the state. Thus, the Consumer in The Marketplace subtest includes twenty-six items on the combined A-B form; likewise, Insurance includes fourteen items, and Consumer in Society, nineteen items, while Recreation and Clothing include only four and seven items respectively.

Assuming that the ITOCK provides broad coverage of the instructional content areas addressed in the Consumer and Homemaking Education Program classes, one would expect that students enrolled in the program (experimental group) would outperform similar students not enrolled in the program. It is not difficult, however, to envision and explain a situation in which this expectation is not realized. With the current, somewhat faddish (in the sense that it may be transient) interest in consumer rights and responsibilities, the average high school student is exposed, through the mass media, to considerable consumer-oriented education. Thus, that which is professed to comprise the curriculum of the

Consumer and Homemaking Education Program might simply be a review of that which is already available through radio, television and magazines. Thus, unlike chemistry, keypunching or autobody repair courses, Consumer and Homemaking Education as a body of knowledge is acquired through considerably more channels than the average school course. The home, as an instructional agent, is potentially as powerful as the school in imparting information like that covered in a Consumer and Homemaking Education course.

The first question then, is whether students enrolled in the program score higher on the ITOCK subtests than control students. To anticipate the answer, the conclusion is that experimental students do, in fact, outperform control students. Table 2 summarizes the findings. On Form A, experimental students score significantly higher than control students on all subtests without exception. The largest program effects are registered on the Consumer Credit, Housing, Consumer in the Marketplace, Money Management, Food and Clothing subtests. The smallest effects are on the Transportation, Insurance, and Furnishings and Appliances subtests. As would be expected, the difference between experimental and control students on the ITOCK total score is highly significant.

Table 2 Standardized Means, Standard Deviations, and T Tests for Experimental and Control Students on Forms A and B of the ITOCK

Subtests / Form A (N)	Consumer in the Marketplace	Money Management	Consumer Credit	Housing	Food	Transportation	Clothing	Health Services	Recreation	Furniture and Appliances	Insurance	Savings and Investments	Taxes	Consumer in Society	Total
Experimental Group(1310)	50.8 (10.1)	50.7 (10.0)	50.8 (10.1)	50.8 (10.0)	50.6 (9.8)	50.3 (9.9)	50.6 (10.0)	50.6 (9.8)	50.6 (9.9)	50.5 (10.2)	50.4 (10.3)	50.6 (10.1)	50.5 (10.0)	50.6 (10.0)	50.9 (10.0)
Control Group (341)	47.0 (8.9)	47.3 (9.7)	46.7 (8.7)	47.0 (10.3)	47.7 (10.6)	48.8 (10.2)	47.7 (9.8)	47.8 (10.6)	47.8 (9.8)	48.2 (9.1)	48.3 (8.5)	47.9 (9.4)	48.0 (9.8)	47.6 (9.6)	46.5 (8.8)
T value	6.2	5.6	6.8	6.3	4.8	2.5	4.9	4.5	4.7	3.7	3.5	4.4	4.1	5.1	7.4
Significance Level	p<.001	p<.001	p<.001	p<.001	p<.001	p<.01	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001	p<.001
Form B (N)															
Experimental Group(1079)	50.4 (10.0)	49.9 (10.0)	50.7 (10.0)	50.5 (10.2)	50.2 (10.0)	50.3 (10.1)	50.2 (10.0)	-	50.1 (9.9)	50.1 (10.9)	50.4 (10.1)	50.1 (10.2)	50.1 (10.1)	50.3 (10.1)	50.5 (10.2)
Control Group (454)	48.9 (9.8)	50.2 (9.9)	48.2 (9.8)	48.9 (9.4)	49.5 (10.0)	49.2 (9.5)	49.6 (10.0)	-	49.8 (10.2)	49.8 (10.1)	49.1 (9.7)	49.7 (9.6)	49.9 (9.8)	49.3 (9.7)	48.9 (9.4)
T value	2.6	-.51	4.5	2.8	1.3	1.9	.96		.52	.38	2.3	.83	.32	1.66	2.8
Significance Level	p<.009	N.S.	p<.001	p<.005	N.S.	N.S.	N.S.		N.S.	N.S.	p<.02	N.S.	N.S.	N.S.	p<.001

The Form B results, although clearly in the same direction, are not quite as pronounced as the Form A differences. Experimental students outscore controls at a statistically significant level on the Consumer in the Marketplace, Consumer Credit, Housing and Insurance subtests. With the exception of the Money Management subtest, all remaining differences favor the experimental group, but are not significant. The difference between experimental and control on Form B Total favors the experimental group, but is not close to approaching the Form A difference.

One conclusion from the variance between Form A and Form B results is that the four subtests (Consumer in the Marketplace, Consumer Credit, Housing, and Insurance) which show consistent differences across forms, are more clearly a product of the instructional program. One possible explanation for the differences in findings between Form A and B is the differential difficulty levels of the two forms - Form B being decidedly more difficult. Several other explanations are offered in the section on components of success.

In summary, the Consumer and Homemaking Program is having a significant impact on student performance on the ITOCK if we can assume that experimental and control students were equal on consumer knowledge prior to the program's inception. Without a pre-post design, the alternative hypothesis that Consumer and Homemaking Education program students were initially more aware than the controls remains plausible. However, we consider it highly unlikely that such an initial difference could manifest

itself so consistently and evenly across fourteen subtests. The pattern of scores is more conducive to an exploration based on program effect than to one based on a sampling deficiency.

Every attempt was made to maintain a constant reading level requirement across subtests. To the extent to which this task was accomplished, some information about program emphasis can be obtained from an examination of subtest profiles for the experimental group. The best indication of differential program effect on certain subtests is to compare percent of perfect score for experimental and control groups. If experimental students score closer to perfect score on certain subtests than do controls, then a case can be made for differential program impact. If the difference between experimental and control students remains relatively constant across subtests and the percent of perfect score remains constant, then a claim for differential program impact cannot be supported.

Several subtest scores seem to be influenced by differential program emphases. In particular, the Money Management, Housing, Food, Clothing, Recreation, and Consumer in Society subtests show significant variation from expectation, suggesting that these areas receive more than average emphasis in most of the Consumer and Homemaking Education program classes. Interestingly, these areas are among the ones cited by teachers as of most importance. This finding is particularly important because it suggests that

the ITOCK is sensitive to different instructional emphases and thus, might be useful for classroom level evaluation.

Whenever a program effect is reported, the next question is, "What instructional strategies or program design considerations are related to the differences between the most successful Consumer and Homemaking Education Program classes and the least successful classes?" It is to this question that we now turn.

Components of Success

One aspect of program evaluation which is given very little attention is the identification of processes (methods, materials, orientations) which are responsible for differential program effects. If one instructional approach shows greater gains on nationally normed or criterion referenced achievement tests, then presumably, the "whole program" is responsible. Imagine where medical science would be if pharmacologists accepted that a particular drug was effective and never asked "why?" The majority of program evaluations address the issue of outcomes and some look at the process,but seldom are the relationships between the two empirically tested.

Program evaluation can be subdivided into at least three major aspects: (1) product evaluation, (2) process evaluation, and (3) process/product evaluation. Product evaluation monitors the outcomes or effects of the program. Process evaluation monitors the strategies and procedures designed to change student or teacher behavior. Process/product evaluation explores the relationships among products and processes. Although often ignored, process/product evaluation is no less important than either product or process evaluation. In terms of questions to be answered, product evaluation asks: "How are the students or teachers different after exposure to the new program"? Process evaluation asks: "What strategies differentiate the new program from traditional approaches, and were these strategies implemented"? Process/product evaluation asks: "What is

the relationship between the instructional strategies and the outcomes of the program"?

Process evaluation is important because program managers need to know "why" a program worked just as much as they need to know how successful it was. The first and most difficult step in process evaluation is to decide on what strategies are being implemented that discriminate one experimental classroom from another. By definition, an innovative educational program will possess characteristics which differentiate it from more traditional educational practices. These characteristics are the ingredients in the program's "recipe". If the "recipe" can be explicitly formulated, then it is likely that it can be replicated; however, more often than not, a program is judged successful in terms of the student outcome data, but the staff does not have the faintest idea of which dimensions of the program were responsible for success. Identification of the "components" or ingredients of program succes is the goal of process/product evaluation.

In contrasting educational programs and classrooms, evaluations often identify the most salient characteristics of the programs, and subsequent succeses or failures are attributed to these salient program features. For example, the difference between two reading programs is described as "linguistic" vs "phonetic' approach, or "small group" vs "tutorial". The designators "linguistic", "phonetic", "small group" and "turorial" are accepted as sufficient for program comparison,

despite the fact that there are, undoubtedly, dozens of more subtle differences (dimensions) between the approaches which are potentially more descriptive. Furthermore, the ways the approaches are alike receive little, if any, attention. This failure to go beyond simplistic, nominal designators or program descriptors contributes substantially to our inability to build a technology of instruction.

Program Structure Analysis (PSA) is a methodological tool, combining several analytical strategies, designed to empirically define the ways programs differ and to relate these differences to program outcomes. In the evaluation of the Consumer and Homemaking Education program, two broad process domains were selected for study: (1) program characteristics including length of course, number of units developed and implemented, etc., and (2) relative importance of various instructional approaches including resource persons, textbooks, field trips, lecture approach, etc. Two separate discriminant analyses were run relating the process variables to Total score on the ITOCK. The dichotomous criterion variable was group membership. Group 1 was composed of teachers with low classroom mean scores on the ITOCK, while group 2 was composed of teachers with high classroom mean scores.

The first analysis employed ten program characteristics in an attempt to discriminate high achieving from low achieving classrooms. The program characteristics included (1) total number of female students, (2) total number of male students, (3) years in teaching, (4) length of course (in days), (5) number of contacts with the Division of Vocational and Technical Education consultants,

(6) whether course was elective or required, (7) teacher involvement in developing the contract agreement, (8) number of units developed for the course, (9) number of units implemented, and (10) number of years teaching Consumer and Homemaking Education.

Three of the ten program characteristics are highly significant in predicting classroom performance on the ITOCK. The first important variable is length of the course (in days). The high achieving group received an average of 31% more instructional time in a Consumer and Homemaking Education class than did the low achieving group. Wiley and Harnischfeger (1974) state:

> It is obvious that if a child does not go to school at all, he will not directly benefit from schooling. If a child goes to school every day for a full school year, he will achieve his maximum benefit from that schooling, other circumstances being equal. It would also seem clear that if he attends school less than the full year, but more than not at all, the benefits he derives from schooling should be in between. That is, the quantity of schooling should be a major determinant of school outcomes.

This is, in essence, what we have found in this evaluation. Students' knowledge of Consumer and Homemaking Education is directly related to amount of time spent in Consumer and Homemaking Education classes. At first glance this finding may seem obvious, but recent studies claiming that school does not make a difference in student achievement are plentiful. The results reported here run directly counter to such claims. Increased exposure to Consumer and Homemaking Education instruction results in increased learning, as measured by the ITOCK.

Two other variables (number of units developed, and number of units implemented) are inversely related to student achievement. As the number of units developed and implemented increases, the achievement of students decreases. At first glance this might seem a little difficult to explain, however, the number of units developed and implemented ranges from 0 to 400. One might argue that it is the quality of the units and time spent in instruction which are the major program dimensions predictive of student achievement, not the number of units implemented in any given period of time.

It is sometimes just as informative to look at non significant predictors as it is to examine those that are significant. Number of male and female students in a class is not a highly significant predictor, although there is a tendency for classrooms with more males to evidence lower achievement. Teacher experience is not an important factor, nor is it apparently important whether teachers are involved in developing the contract agreement. This latter finding is somewhat contrary to the expectation that those teachers developing the contracts might be more effective than those not involved in the development process. Although there was considerable variability in the number of D.V.T.E. consultant contacts, this variable was unrelated to student performance. Likewise, it apparently does not matter whether the course is elective or required - students learn the same amounts under both structures.

In summary, the major program dimension predictive of student performance is time spent in instruction. Apparently, a few well implemented course units is superior to a smorgasbord of course units. The instructional implications of these findings are (1) to increase, if at all possible, either the number of days which the Consumer and Homemaking Education classes meet or increase the length of the class period, and (2) to focus the course content on several well developed units as opposed to a shotgun activities approach. We turn now to a look at some of the key instructional strategies predictive of student success.

Teachers were asked to rank twenty-two instructional approaches in order from those most used in their classroom to those least used. The list of approaches included: (1) textbooks, (2) multi-media, (3) resource persons, (4) games, (5) puzzles, (6) case studies, (7) discussions, (8) field trips, (9) team teaching, (10) student demonstrations, (11) group demonstrations, (12) product evaluation, (13) reference books, (14) audio-visual, (15) lecture approach, (16) individual research, (17) bulletin boards, (18) debates, (19) panel discussions, (20) role playing, (21) interview/survey and (22) observation. Table A gives the rank order of these approaches from the most used approach (i.e., discussions) to the least used approach (i.e., case studies). Although the rank ordering reflects the general emphasis given to these instructional approaches, it should be noted that a great deal of variability exists among teachers in the strategies with which they feel most comfortable.

Table A

1. Discussions
2. Textbooks
*3. Multi-media
4. Reference Books/Materials/Papers/Media
5. Audio-visual
6. Group Presentations
*7. Student Demonstrations
8. Observations
9. Panel Discussions
10. Individual Research
11. Bulletin Boards
12. Lecture Approach
*13. Resource Persons
14. Product Evaluation
*15. Team Teaching
*16. Debates
17. Games
18. Interview/Surveys
19. Puzzles
20. Role Playing
*21. Field Trips
22. Case Studies

Asterisk denotes significant contribution to discriminant function.

Six of the instructional approaches are powerful predictors of student achievement on the ITOCK (accounting for some 20% of the achievement variance). These are (1) resource persons, (2) debates, (3) student demonstrations, (4) multi-media, (5) team teaching and (6) field trips. Each of these six instructional approaches is characteristic of the high achieving classrooms to a significantly greater degree than they are characteristic of low achieving classrooms.

Referring back to the rank ordering of instructional approaches, it is interesting to note that four of the six significant predictors (asterisks) are in the lowest fifty percent in terms of use. This finding suggests that students could benefit from an increased utilization of these six approaches and that much room exists for increased use of at least four of the six approaches.

Not surprisingly, each of the six approaches involves action and movement. A discovery approach underlies each of the six significant predictors and this, as much as any other finding in this evaluation, has implications for instruction. Students in Consumer and Homemaking Education classes learn more when they are "acting", "doing", "creating", "moving", and "discovering" than when instructional approaches not having an "action-oriented" dimension are employed.

A comparison of T scores on the ITOCK and amount of contract funds devoted to instructional materials suggests the following: 1) those contracts which produce the highest average ITOCK scores (56.05) utilize an average of $6.22 per student for instructional materials; 2) those contracts which produce the lowest average ITOCK score (40.56) utilize an average of $24.77 per student for instructional materials; 3) it is interesting to note that the contract which produced the highest mean score (60.10) had $2.03 budgeted for instructional materials, and the contract with the lowest mean score (26.63) had $16.66 budgeted for instructional materials.

The previous section of this chapter demonstrated that the Consumer and Homemaking Education Program does have an impact on student achievement as measured by the ITOCK. This section has identified one major program characteristic (time spent in learning) and six instructional approaches which are empirically related to student achievement. In short, the Consumer and Homemaking Education Program is effective, and we have some idea of what ingredients make it effective.

Self Observation Scales

The Self Observation Scales (Senior Level) is a direct, self report, group administered instrument comprised of ninety (90) items which measure how students perceive themselves and their relationships to peers, teachers, family and school. The SOS differs from other similar instruments in (a) the extensive validation study which accompanied the national norming effort, and (b) the emphasis on the healthy and positive, rather than pathological and negative dimensions of students' affective behavior.

The affective development of students has not received the attention from educators that students' cognitive development has enjoyed. This is partially explained by the lack of widely applicable, well standardized, empirically validated, multidimensional measures of affective behavior. Within the last five years, there has been a resurgence of interest in the importance of students' affective development. Educators are acknowledging substantial relationships among how students feel about themselves, behavior and scholastic achievement.

The probability samples on which the Senior SOS norms are based were constructed according to criteria obtained from the Office of Civil Rights 1972 data on ethnic and socioeconomic characteristics of U.S. school children. The norm group for the Senior Level (grades 10-12) consists of 5400 cases drawn from an original sample of 10,000 students from 84 school systems across the nation.

The Senior Level (Form A) of the SOS measures nine dimensions of students' affective behavior. Before examining some of the most important relationsips, a description of each of the scales is in order. Each scale is labeled in a positive manner with high scores being most characteristic of the label.

SCALE I - SELF ACCEPTANCE

Students with high scores view themselves positively and attribute to themselves qualities of basic competence, self satisfaction and happiness. They see themselves as being good at a lot of activities and as being confident about their future success. Students with low scores are unsatisfied with their performance and capabilities and are unsure of their futures. Three items highly related to this scale are: I am a happy person; I think I will be successful in life, I am proud of most things I do.

SCALE II - SELF SECURITY

Students with high scores report a high level of emotional confidence or stability. They report being in control of factors affecting their lives and worry very little about either specific or non-specific fears. Students with low scores on this scale worry a great deal. They report nervousness about non-specific performance expectations and often feel that they worry more now than in the past. Three items highly related to this scale are: I have more fears than most people; At times I lose sleep over worry; I worry about losing my friends.

SCALE III - SOCIAL CONFIDENCE

Students with high scores on this scale feel confident of their ability to relate in social situations. They feel confident about thier ability to make and keep friends and believe that other people value their friendship. Students with low scores have difficulty making friends and lack confidence in social situations. Three items highly related to this scale are: People who are like me don't have a good chance to be successful; Most of my friends don't care what I think; If people knew what I am really like, they would steer clear of me.

SCALE IV - SOCIAL MATURITY

Students with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They are comfortable around younger children and show empathy in their social relations. They believe in saying what they feel and understand the importance of listening to others. Students with low scores on this scale are socially self centered, lack responsiveness to other people's feelings and are reticent to express their own feelings. Three items highly related to this scale are: I am able to listen and be aware of the needs of others; Younger kids usually bore me; Most of the time I feel sorry for someone who is hurt.

SCALE V - SELF ASSERTION

Students with high scores view themselves as possessing leadership qualities and as being respected by others for these qualities. The emphasis on this scale is on how students believe others view them. Students with low scores see themselves as lacking leadership ability and assertiveness. Three items highly related to this scale are: Other students look to me for leadership; Other students look to me for ideas; I enjoy talking in front of a group of people.

SCALE VI- FAMILY AFFILIATION

Students with high scores on this scale report a positive relationship with their parents and family. They see their parents as helping in time of need and as being understanding. Students with low scores don't see home as a place to go when troubles begin. They do not feel trusted by their family and, likewise, do not feel that they treat their family as well as they should. Three items highly related to this scale are: My parents usually understand my problems; My parents do all they can for me; I treat my parents as well as I should.

SCALE VII - PEER AFFILIATION

Students with high scores on this scale consider their relationships with other students to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other students. Students with low scores do not see their peer relationships as an asset. They see other students as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily. Three items highly related to this scale are: Most people are much better liked than I am; I feel left out a lot; I can count on my friends when I am in trouble.

SCALE VIII - TEACHER AFFILIATION

Students with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Students with low scores see the teacher as arbitrary, inconsiderate of children and/or as a source of emotional pain. Three items highly related to this scale are: My teachers like to help me; When I do something wrong, my teachers correct me without hurting my feelings; My teachers expect too much of me.

SCALE IX - SCHOOL AFFILIATION

Students with high scores view school positively, enjoy going to school and enjoy the activities associated with school. Students scoring low on this scale see school as a "hassle" that keeps them from doing what they want to do. Three items highly related to this scale are: I like to stay home from school; This school is like a jail; School frequently keeps me from doing what I want to do.

The correlations among the scales are presented in Table 3 on the following page. The highest correlation in the matrix is between Teacher Affiliation and School Affiliation (.61). Self Acceptance correlates highly with Family Affiliation and Peer Affiliation. Likewise, Self Security has its highest correlations with Family Affiliation and Peer Affiliation. Social Confidence has its highest correlation with Peer Affiliation. Social Maturity is, for the most part, orthogonal to the other scales. Self Assertion is moderately correlated with the four affiliation scales and Self Acceptance. In addition to Self Acceptance, Family Affiliation is moderately correlated with Peer Affiliation and Teacher Affiliation.

The scale reliability estimates for the Senior Level are given in Table 3. The values are split-half reliabilities corrected using the Spearman-Brown Prophecy Formula.

Table. 3 Correlations Among the Scales of The Senior SOS

	Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
Self Acceptance	1.0	.10	.22	.17	.34	.42	.47	.30	.28
Self Security		1.0	.20	.21	.19	.28	.27	.13	.05
Social Confidence			1.0	.13	.15	.28	.49	.34	.16
Social Maturity				1.0	.16	.15	.10	.24	.16
Self Assertion					1.0	.34	.40	.33	.30
Family Affiliation						1.0	.43	.50	.36
Peer Affiliation							1.0	.30	.15
Teacher Affiliation								1.0	.61
School Affiliation									

Table 4 Split Half Reliabilities for the Senior SOS

Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
.73	.80	.79	.57	.82	.85	.87	.83	.87

With the possible exception of the Social Maturity scale, all reliabilities are moderately high with five scales having reliabilities in the eighties.

All results are presented as "T" scores with a national norm mean of 50 and a standard deviation of 10. The results which follow deal with the relationships between the SOS and average school grades, participation in extracurricular activities, post school plans, and teacher-rated popularity.

Table 5 presents mean SOS scores for levels of achievement, and the multiple correlation between the SOS scores and achievement.

Table 5 Average School Grades and Self Observation Scale Scores

Avg. Grade	N	Scale: Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
A	134	51.5 (7.4)	51.2 (9.8)	50.9 (9.7)	53.3 (8.9)	55.7 (10.2)	52.8 (9.5)	49.8 (10.6)	52.9 (12.5)	52.4 (10.5)
A-	162	51.4 (9.1)	50.7 (9.7)	50.7 (9.3)	54.0 (7.9)	53.6 (9.8)	51.3 (9.7)	49.9 (10.5)	52.5 (10.8)	52.4 (9.9)
B+	313	51.0 (9.4)	49.7 (10.7)	52.2 (8.8)	53.2 (8.6)	51.8 (10.1)	50.2 (10.2)	50.0 (10.7)	51.4 (11.5)	50.6 (10.7)
B	461	50.6 (9.0)	49.1 (9.7)	51.8 (8.7)	51.9 (8.9)	49.0 (9.8)	49.4 (9.9)	50.0 (10.0)	49.9 (11.8)	49.7 (10.9)
B-	246	50.6 (9.2)	50.0 (9.9)	50.0 (8.9)	51.7 (8.5)	49.4 (9.3)	49.8 (10.1)	50.9 (9.6)	49.1 (11.5)	48.8 (10.5)
C+	317	50.3 (8.7)	49.7 (10.0)	49.9 (8.6)	50.2 (9.0)	48.8 (9.1)	49.8 (10.1)	51.0 (8.9)	48.2 (12.3)	49.0 (10.7)
C	469	48.7 (10.6)	48.4 (10.2)	49.7 (9.0)	47.7 (9.8)	45.9 (8.8)	48.1 (10.0)	48.9 (10.3)	44.8 (13.0)	46.1 (10.8)
C-	162	46.8 (10.8)	47.5 (8.9)	49.0 (8.8)	47.0 (10.3)	46.4 (9.1)	45.8 (10.4)	48.7 (10.5)	44.8 (11.8)	45.7 (10.0)
D+	60	45.3 (11.8)	49.4 (10.4)	46.1 (10.0)	46.9 (9.9)	45.4 (7.8)	46.1 (9.3)	48.4 (10.3)	43.5 (13.5)	44.8 (10.8)
D	75	44.9 (10.9)	48.1 (9.3)	47.3 (9.4)	44.8 (11.3)	43.7 (8.6)	45.0 (9.8)	47.3 (10.8)	41.3 (13.8)	40.5 (10.6)
D-	27	44.0 (11.2)	47.2 (10.9)	47.6 (12.3)	40.5 (10.0)	46.7 (8.3)	42.3 (11.2)	44.7 (10.7)	38.1 (14.3)	40.0 (10.6)

Multiple correlation of SOS scales and average school grades

$r = .46$ ($p < .001$).

National Norm Mean = 50.0

National Norm Standard Deviation = (10.0)

The relationships between the SOS scales and average school grades are dramatic, to say the least. Large differences are particularly evident between top and bottom students. Recalling that half the sample are high school seniors, we can glimpse one of the outcomes of repeated failure across twelve or thirteen years of public school experience. The human cost of repeated failure can be partially animated by noting the one-half standard deviation difference in Self Acceptance, Social Confidence, Social Maturity, Self Assertion, Family Affiliation, Teacher Affiliation and School Affiliation, between B average and D average students. This sample includes those students that, for one reason or another, elected to stay in school. An interesting question concerns the self concepts of the dropouts, seeking employment with inadequate skills and a fundamental feeling of dissatisfaction with themselves.

Lavin (1965) asserts that few consistent and sizable relationships between academic achievement and affective behavior have been found. This evaluation provides some of the first large-scale evidence that students' affective behavior is inextricably implicated in scholastic achievement. The instructional implications of these results (coupled with past research with the SOS) appear clear and straightforward. Instructional strategies in Consumer and Homemaking Education which provide a means for more students to have more success would seem preferable to those which do not because of the potential impact on affective development of the students. This implication presupposes that affective development is a direct product of cumulative success and

failure, and the best available evidence suggests that this is, in fact, the case. Important in this formulation is the recognition that one semester or one year of success may have little impact, rather, cumulative success over several years is needed to positively influence something as fundamental as students' self concepts. What is needed in Consumer and Homemaking Education is an intensive and extended exposure to success- and competence-enhancing experiences.

Consumer and Homemaking Education can be viewed as opening new options for students and familiarizing the student with aspects of his immediate environment of which he has had little occasion to explore. Homemaking is an important aspect of both men's and women's adult existence, and Consumer and Homemaking Education is the first intense exposure that many students get to this area. Because Consumer and Homemaking Education represents a "new activity" with potential for generating interests in any number of pursuits, the relationships between extracurricular activities and affective development was investigated. Table 6 presents the SOS scores for students with varying numbers of outside interests. As can be seen from an examination of Table 6, the more extracurricular activities a student is involved in, the higher his SOS scores. We can hypothesize that this finding has a similar explanation to the achievement results and that again, competence and success, in whatever the endeavor, breeds strong self concept development. Students with no outside interests are significantly lower on most SOS scales than those students pursuing two or more extracurricular activities.

Table 6 Extracurricular Activity Participation and Self Observation Scale Scores

		Scale								
	N	Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
No Activities	1123	48.6 (10.7)	49.2 (10.1)	49.8 (9.2)	49.0 (9.9)	46.5 (8.8)	48.1 (10.3)	48.6 (10.9)	47.0 (12.8)	46.9 (11.0)
One Activity	690	50.3 (8.9)	49.1 (9.7)	50.8 (8.9)	50.2 (9.3)	49.0 (9.4)	50.0 (9.9)	50.1 (9.2)	48.7 (12.1)	48.8 (10.9)
Two or three Activities	519	50.5 (9.1)	49.3 (9.8)	50.4 (9.0)	52.4 (9.0)	52.0 (10.3)	49.7 (10.2)	50.8 (10.0)	49.4 (12.5)	51.2 (10.4)
Four or more Activities	151	52.4 (7.0)	50.3 (10.2)	51.2 (9.2)	53.6 (9.0)	53.3 (10.1)	51.0 (9.4)	52.3 (8.2)	50.6 (12.2)	52.3 (10.3)

The fact that Consumer and Homemaking Education is housed under the aegis of vocational education makes the relationships between post school plans and self concept particularly pertinent. More than one-third of the students enrolled in the Consumer and Homemaking Education program will be beginning jobs and presumably leaving home soon after high school. Unfortunately, these students who most need the information and guidance offered in Consumer and Homemaking Education are those with the lowest self concepts and self confidence. It is most likely that the students planning to finish high school and go to work are the same students who have experienced repeated failure throughout their school careers.

It is unlikely that one year of Consumer and Homemaking Education can reverse a trend established over twelve years, but it is conceivable that each Consumer and Homemaking Education student can enter the world of work with confidence in his own ability to understand the new economic and social pressures he will face.

Table 7 Post School Plans and Self Observation Scales Scores

	Scale								
		Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
	N									
Finish School, Go to work	940	48.6 (10.4)	48.2 (9.9)	50.2 (9.1)	48.8 (9.8)	45.7 (8.4)	47.3 (10.1)	48.9 (10.5)	45.7 (13.0)	45.8 (10.7)
Go to a Trade School	299	50.2 (8.8)	51.1 (9.7)	47.3 (9.9)	49.7 (9.5)	48.5 (9.1)	49.5 (9.7)	50.2 (9.4)	47.6 (12.4)	48.4 (11.1)
Go to Junior College	472	49.6 (10.5)	48.2 (9.8)	51.4 (8.5)	51.0 (9.2)	48.6 (9.5)	48.8 (10.2)	48.8 (10.7)	48.7 (12.3)	49.0 (10.4)
Go to College	708	51.2 (8.3)	50.7 (9.9)	51.3 (8.7)	52.3 (9.0)	54.1 (9.9)	51.7 (9.8)	51.3 (9.3)	51.8 (11.0)	52.1 (10.2)

Multiple Correlation of SOS Scales and Post School Plans

$r = .41$ $(p < .001)$.

A discriminant analysis was run to determine the extent to which the nine SOS scales could discriminate between four categories of post school plans. All nine SOS scales contributed significantly ($p < .001$) to the discriminant function with Self Assertion, School Affiliation, Family Affiliation and Teacher Affiliation leading the way. Table 6 gives the prediction results. Values in the diagonal are correct classifications, while values in the off-diagonal are misclassifications.

Table 8 Prediction Results - Using SOS Scales to Predict Post School Plans

		Predicted Group Membership			
Actual Group	Number of Cases	Group 1	Group 2	Group 3	Group 4
Group 1 To finish high school, then go to work	940	424 45.1%	215 22.9%	157 16.7%	144 15.3%
Group 2 To finish high school, then go to a trade school	299	78 26.1%	103 34.4%	41 13.7%	77 25.8%
Group 3 To finish high school, then go to a two-year junior college	472	148 31.4%	92 19.5%	96 20.3%	136 28.8%
Group 4 To finish high school, then go to college	708	99 14.0%	130 18.4%	124 17.5%	355 50.1%

Forty-five percent of those students reporting a desire to finish high school and go to work can be correctly classified, while only 34% and 20% of the trade school-bound and junior college-bound students can be correctly classified. The best predictions can be made with the college-bound student, in that 50% of these students' post school plans are correctly predicted. The total of correct classifications is 40%, which is 15% better than chance. By far the greatest separation, and thus differences on the SOS scales, is found in the comparison of the "go to work" group and the "college-bound group". Of the 708 students planning college careers, only 99 (or 14%) are misclassified as planning to "go to work", while of those planning to go to work, only 15% are misclassified as planning to go to college. Clearly, students planning to finish high school and go to work are quite distinguishable from those students planning college careers. The distinguishing characteristics manifest as depressed Self Assertion, Family Affiliation, Social Confidence and School Affiliation scores.

Table 9 Family Income and Self Observation Scales Scores (T Scores National Norm Mean - 50; S.D. = 10)

	N	Scale: Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
Family Income Under $8,000	424	48.2 (10.5)	48.1 (10.3)	51.2 (8.3)	46.0 (10.5)	46.8 (9.3)	47.9 (10.1)	47.1 (10.6)	46.9 (12.9)	48.7 (11.4)
Family Income between $8,000 and $16,000	843	49.7 (10.0)	49.2 (9.8)	50.2 (8.8)	51.3 (9.1)	48.6 (9.7)	48.8 (10.3)	50.4 (10.1)	48.4 (12.7)	48.5 (11.2)
Family Income over $16,000	254	50.6 (8.7)	50.4 (9.8)	50.3 (9.3)	53.2 (7.9)	51.9 (10.1)	50.3 (10.1)	51.0 (10.2)	48.1 (12.9)	47.1 (10.7)

Educators have long recognized the pervasive effect that socio-economic status (SES) registers on students' achievement. Table 9 suggests that SES in the form of family income also substantially affects students' affective development. With the exception of two scales (Social Confidence and School Affiliation) there is a positive relationship between family income and SOS scores, ie., as family income increases, SOS scores increase. Rather sizeable differences are apparent on Social Maturity, Self Assertion and Peer Affiliation.

Table 10 Teacher-Rated Popularity and Self Observation Scales Scores

Popularity Rating	N	Scale: Self Acceptance	Self Security	Social Confidence	Social Maturity	Self Assertion	Family Affiliation	Peer Affiliation	Teacher Affiliation	School Affiliation
High	115	52.6 (5.8)	49.6 (10.1)	51.7 (8.2)	55.3 (8.0)	56.5 (9.5)	53.0 (8.9)	53.7 (7.4)	52.4 (11.5)	52.2 (9.7)
Above Average	330	51.5 (7.3)	49.4 (9.6)	51.6 (8.1)	53.2 (8.3)	51.5 (10.0)	50.8 (9.4)	52.2 (8.7)	50.7 (11.1)	49.8 (10.4)
Average	733	49.7 (9.6)	49.4 (9.8)	50.5 (8.6)	49.7 (9.6)	47.8 (9.3)	48.9 (10.2)	49.5 (10.0)	48.0 (12.6)	48.5 (11.3)
Below Average	222	47.0 (11.9)	47.6 (10.7)	49.2 (9.4)	46.7 (10.3)	45.8 (9.0)	45.5 (10.6)	46.8 (10.9)	44.3 (14.1)	46.1 (11.6)
Low	64	42.7 (13.8)	48.9 (10.5)	47.1 (9.7)	45.6 (10.0)	42.9 (8.5)	44.6 (10.9)	41.7 (13.9)	44.5 (13.4)	45.3 (11.4)

Multiple Correlation SOS Scales with Teacher-Rated Popularity

$r = .36$ $(p < .001)$.

National Norm Mean - 50.0

National Norm Standard Deviation - (10.0)

The results in Table 10 contrast teacher ratings of student popularity with SOS scores. The Consumer and Homemaking Education teachers rated each student as high, above average, average, below average, or low, in terms of popularity with peers. As might be suspected, large differences are evident between high and low popularity students on Peer Affiliation, Self Acceptance, Self Assertion, Social Maturity and Family Affiliation. One implication of this finding is that teachers can identify students who hold low opinions of themselves and lack social confidence. Armed with this information, Consumer and Homemaking Education teachers might be able to begin identifying teaching strategies which contribute to positive affective development in their students. Knowledge gained from the SOS, or an instrument like it, can make teachers aware of specific student deficiencies in the affective area.

All in all, it is safe to say that self concept is profoundly influenced by what goes on in the classroom. Consumer and Homemaking Education teachers are not exempt from a responsibility for the affective development of their students. Quite the contrary, Consumer and Homemaking Education teachers appear to exercise more freedom and tend to innovate more in selecting and implementing educational strategies, and thus might be more likely to address students' affective needs. Many of the students served by Consumer and Homemaking Education programs evidence low self concepts and are about to face the new demands and pressures of a job and family. Any contribution that the Consumer and Homemaking Education Program can make to feelings of self worth and competence would be welcome.

Student versus Teacher Perceptions

The next area isolated for analysis is the relationship of student desirability and teacher importance of specific cognitive outcomes. We gathered desirability indices from students and levels of importance from the teachers. Additionally, the authors reviewed every funded proposal and tallied, according to Metfessel, Michael and Kirsner's Instrumentation of Bloom's Taxonomy of Cognitive Objectives, every proposed program objective.

The instrumentation provides examples of infinitives and direct objects for each cognitive level. While the authors suggest that the infinitives and objectives not be used as a formula for the development of objectives, they provide, in this instance, guidance for classification of each objective.

Descriptions of the cognitive levels were modified for the Student Data Sheet and the Instructor Data Sheet in the following manner:

Instructor Data Sheet	Student Data Sheet
Level I - Knowledge of: meanings, properties, rules, process, methods, interrelationships	To Know: what something means, what it is made of, that two or more things are related, and how to do things

Instructor Data Sheet	Student Data Sheet
Level II - Comprehension of: definitions, relationships, conclusions, probabilities	To understand: what a definition means, why two or more things are related and why you come to a certain conclusion
Level III - Application of: methods, procedures, generalizations	To be able to: follow a procedure to get something done, apply a skill you have in different situations, and apply a theory you have learned to a different situation
Level IV - Analysis of: assumptions, statements, evidence, techniques	To be able to analyze: what will happen to someone as a result of your actions, the difference between what is and what could be, and when someone is trying to get you to act in a way they want you to act
Level V - To produce: objectives, solutions, operations, generalizations	To be able to produce: a plan of action for you and/or others to follow, an improved set of objectives for a small group of people, and a list of correct reasons for why people do things the way they do
Level VI - To assess: fallacies, alternatives, standards, reliabilities	To be able to make a judgement about: the truth, choosing a different way, how efficient something is, and if there are errors in what someone tells you

Additionally, twenty-two distinct process approaches were listed or grouped and teachers were asked to list, according to use, and students were asked to select the method which helped them the most in Consumer and Homemaking Education.

The authors reviewed every contract on file and tallied every objective according to its level within the cognitive domain. Additionally, teachers were asked to rank each cognitive level according to its desirability as a student outcome, and students were asked to rank them as abilities they would like to have upon completion of the course. The comparison of rank orders is illustrated below.

Proposal Objectives	Student Desired Abilities	Teacher Desired Student Outcomes
Knowledge	Analysis	Synthesis
Application	Application	Evaluation
Comprehension	Evaluation	Analysis
Analysis	Knowledge	Comprehension
Synthesis	Comprehension	Knowledge
Evaluation	Synthesis	Application

A rank order correlation coefficient of -.88 exists between proposal objectives and teacher desired outcomes, which suggests that the funding agency should either rethink the requirement of proposing objectives, involve the classroom instructor in the preparation of the proposal, or solicit objectives according to an announced ranking.

The correlation between student choice and teacher choice is greater. It appears that students are desirous of developing and applying Consumer and Homemaking skills. While student desires are not normally thought of as mandates, the authors suggest contracting schools should reassess their outcome objectives in relation to these findings.

Table 11 compares the rank order of instructional approaches by teachers and the top seven choices of the most helpful approaches selected by students.

Table 11

	Teacher Rankings		Student Rankings
	1. Discussions		1. Discussions
	2. Textbooks	*	2. Field Trips
*	3. Multi-media	*	3. Debates
	4. Reference Books/ Materials/Papers		4. Textbooks
		*	5. Multi-media
	5. Audio-visual	*	6. Resource persons
	6. Group Presentations		7. Reference Books, etc.
*	7. Student Demonstrations		

Asterisk denotes significant contribution to discriminant function.

It is extremely noteworthy that four of the top six predictors of achievement are among the top third of student preferred instructional approaches. This result certainly supports the notion that students could benefit from an increased utilization of these methods, and suggests that students are highly receptive to such an increase.

Percent of Instructional Time Devoted to Each Content Area

The authors are not completely clear about the monitoring agency's philosophy of control, i.e., does it seek to have an extreme amount of diversity of approaches from the contracting districts or does it desire a fair degree of homogeneity in the approach to the instructional problem? In either event, we wish to make the following observations.

There exists a fair amount of variability in the allocation of instructional time among the top 26% of the content areas listed below. At either end of the range, a significant number of teachers are devoting an insignificant or excessive amount of instructional time to Consumer Credit, Money Management, Consumer in the Marketplace, and Housing.

Consumer Credit	10.5
Money Management	10.3
Consumer in the Marketplace	7.9
Housing	7.3
Insurance	6.7
Food	6.3
Savings and Investments	5.7
Consumer in Society	5.5
The Dual Role	5.2
Furnishing and Appliances	4.9
Transportation	4.8
Clothing	4.4
Taxes	4.1
Health Services	3.9
Recreation	2.4

Interest and Achievement in Consumer and Homemaking Education

In the volumes of literature within the field of education there exists a significantly large segment devoted to teaching strategies designed to increase learning. The interrelationship of interest toward, and learning in, a specific subject area is an important determinant in the development of such strategies. As Muriel Gerhard in Effective Teaching Strategies With Behavior Outcomes Approach states "How the pupil perceives the task, how he feels about it, will determine the degree of involvement and learning" (1971, p. 71).

Concern over the importance of interest to classroom learning in modern American education began with John Dewey's Interest and Effort in Education published in 1913. Dewey recognized that interests are related to effort in learning, but could only imply an opinion that in such a relationship interest was a result of some other basic variables of learning. Although subsequent early learning theorists were divided over the importance of interests or motivations in learning - Watson (1919), Smith and Guthrie (1921), Hull (1930), and E.L. Thorndike (1935) accorded little or no importance to such, while McDougal (1908) and Tolman (1932) considered them pivotal to successful learning - Winter (1973) and Marx (1970) have shown how the development of most learning theories has expanded to include interest and

motivation[1] as important aspects of learning paradigms.

Of primary concern in understanding the interrelationship of interest and learning achievement, or any other interrelationship, is the predominant causal direction between the two variables. Knowing whether changes in variable "A" cause variable "B" to change more than changes in variable "B" cause variable "A" to change, and in which direction those changes occur, allows the researcher to better understand behavior affected by "A" and "B". Accordingly, to understand whether changes in interest cause changes in learning achievement more than changes in learning achievement cause changes in interests allows an educator to better

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[1] Within this literature "interest" seems to be defined as one, or a combination of the following:

a. A perceptual condition of less magnitude than an attitude or value.

b. A tendency to seek out and participate.

c. A tendency to prefer or direct attention in one way rather than in another.

d. A further anticipation of derived pleasure (whether that pleasure be originated from an external press-phenomenon of learning.

The perceived relationship to motivation also varies in the literature. At times authors use "interest" and "motivation" as synonymous terms. Others imply that interest is a directive-selective behavior while motivation is the quantitative nature of that behavior. For example, one may be interested in a subject area, but no "action" or learning may be generated in that area until a motive exists. Recently Atkinson and Raynor (1974), Luborsky et al (1971), and McClelland and Winter (1969) have perceived interest to be a conscious directive sub-part of a general concept of motivation. For the purpose of this study interest is defined as a conscious level of preference for a subject area without any attempt to define the origin of such a feeling.

perceive the most effective (and efficient) manner in which to address certain problems concerning classroom achievement. For example, because budget dollars are limited, it would be advantageous to know whether expenditures for special student activities designed to increase interest in Consumer and Homemaking Education are more justified than expenditures in more sophisticated approaches to teaching which, if successful, may increase student interest toward this area.

A survey of the literature finds, however, that few authors explicitly state an opinion as to the nature or causal direction of the interrelationship between interest and classroom achievement. Those learning theorists and classroom strategists who do venture an opinion on the subject are at variance concerning the predominant causal direction in the interrelationship. From the theoretical works of Arnold (1962), Atkinson and Raynor (1974), Crandall et al (1960), Gagne (1965), Hunt (1970) and McClelland et al (1953), it is implied that the predominant causal direction is from interest to achievement. Gordon (1973) and Moulton (1974), however, imply that success will generate interest. Among teaching strategists Alschuler (1973), Gerhard (1971), and Standley (1973) imply that increased student interest causes increased classroom achievement. Ausubel (1968), Hanachek (1970) and Mager (1968), however, imply the opposite.

The survey also indicated that there appears to be a lack of research investigating the relationship of interest and achievement. Most research has either been concerned with the problems

of identifying and measuring the two variables (Cattell, 1965; McClelland et al, 1975), or in investigating the relationship no further than simple correlation (McClelland and Winters, 1974; Krug, 1975; Uhlinger and Stephens, 1960). With the single exception of Raymond Cattell (Illinois 1962, 1975) there appears to be no mention of the critical question of causation. Cattell acknowledged the need for investigation into causality, and expressed the belief that modern techniques and the computer make such research possible.

Recent work by A. Jackson Stenner and William G. Katzenmeyer at Duke University working in cooperation with the West Virginia State Education Agency, suggests that achievement causes interest. The, as yet unpublished, study involved 17,000 students measured as ninth graders and again as eleventh graders. Achievement and interest measures were administered at both points in time and an analytical model called cross lagged panel analysis was used to establish the direction of causal influence. The results were overwhelmingly in favor of the hypothesis that achievement causes interest.

These findings are reported here because a rather substantial correlation was found between interest in Consumer Education and achievement on the ITOCK ($r = .38$). An explanation for this finding can be gleaned from the West Virginia study. Students become interested in those activities which provide an opportunity to learn new concepts and apply new relationships. The correlation

between achievement and interest, coupled with the previous findings that a discovery action-oriented approach is effective, suggests that students learn more and are most interested in courses in which they actively participate. The active participation causes learning, and learning causes increased interest. The instructional implications of this model are obvious. Attempts at making a course more interesting so that children will learn more is putting the cart before the horse. Children become interested because of successful learning experiences, not vice versa. By emphasizing action-oriented student participation activities, the Consumer and Homemaking Education Program teacher can promote student learning and, as a by-product, increase student interest in the Consumer and Homemaking Education area.

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